

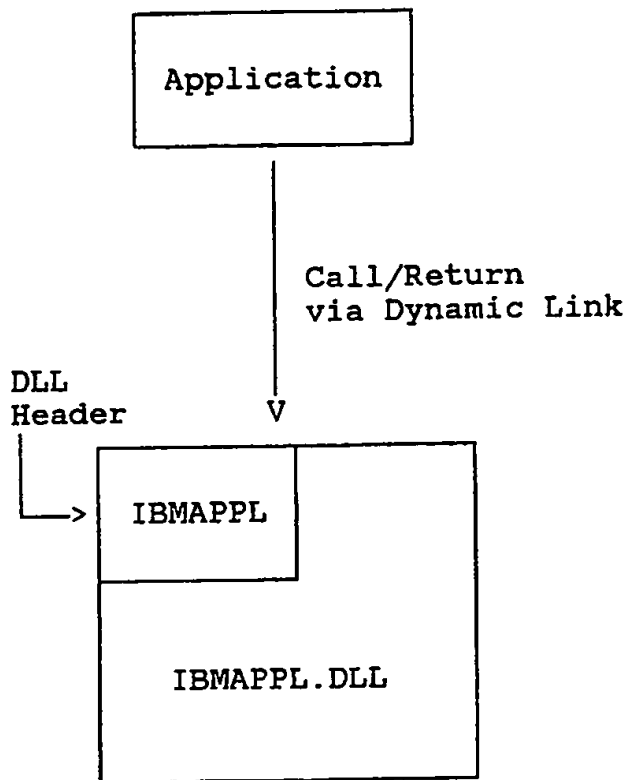
TDB-ACC-NO: NB9011140**DISCLOSURE TITLE: Tracing the Exported Entry Points in an OS/2 Dynamic Link Library.****PUBLICATION-DATA: IBM Technical Disclosure Bulletin, November 1990, US****VOLUME NUMBER: 33****ISSUE NUMBER: 6B****PAGE NUMBER: 140 - 141****PUBLICATION-DATE: November 1, 1990 (19901101)****CROSS REFERENCE: 0018-8689-33-6B-140****DISCLOSURE TEXT:**

- A method is described for intercepting calls to exported entry points in an OS/2* dynamic link library (DLL) for the purpose of recording the sequence of calls to such entry points. This method enhances problem determination and performance measurement without requiring any source code changes to the DLL. - To intercept calls to the exported entry points in an OS/2 DLL a second DLL must be created which contains every entry point in the original DLL. For example, consider a DLL named IBMAPPL.DLL which contains 3 exported entry points: Init, Process and Shutdown. A second DLL named MYTRACE.DLL is created with precisely the same 3 exported entry points: Init, Process and Shutdown. The 3 entry points in MYTRACE use precisely the same input parameter list used by IBMAPPL. Each time any one of the 3 MYTRACE functions is invoked a generic tracing utility is invoked, to trace the start of the requested function. MYTRACE then calls its counterpart entry point in IBMAPPL and passes the input parameters on to the IBMAPPL entry point. When the call to the IBMAPPL function returns to MYTRACE the generic tracing utility is called again to trace the completion of the requested function and any other pertinent information, such as return code, returned data, etc. Refer to the figure for a pictorial representation of the relationship between the calling application, MYTRACE and IBMAPPL. - There is one other step that must be taken for this method to work as described. All applications which make use of the functions provided by IBMAPPL expect those functions to be imported from IBMAPPL.DLL. In order for MYTRACE to get control instead, MYTRACE must be named IBMAPPL.DLL during the link step. The original IBMAPPL DLL must be renamed to something to which only the tracing code has access. In addition to renaming the original DLL to something other than IBMAPPL (e.g., XXXAPPL), the module name in the DLL header must be changed using a binary file editor. In this example the original IBMAPPL DLL file is renamed XXXAPPL.DLL, and the module name in the DLL header is changed from IBMAPPL to XXXAPPL. The code in MYTRACE (actually named IBMAPPL.DLL) imports the 3 functions (Init, Process and Shutdown) from XXXAPPL.DLL. * Trademark of IBM Corp.

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Without the Trace DLL



With the Trace DLL

